Chronic Pain Management Program

Group Curriculum Part VII

Pharmacy

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Discussion Overview

I. Introductory remarks concerning pain management

II. Nondrug treatments for chronic pain

III. Pharmaceutical options & concerns in the treatment of chronic pain

IV. Closing remarks on pain management

V. Question/Answer session & completion of program

Introduction to Pain Management

- 50 million Americans suffer from chronic pain (1 out of 5)
- $65 billion lost each year in productivity
- Pain: an unpleasant sensory and emotional experience associated with actual or potential tissue damage.
- Chronic pain: pain that has not subsided after a reasonable time of healing following a tissue injury.

Introduction to Pain Management

- Types of pain: nociceptive vs. neuropathic
- Nociceptive pain is primarily due to injury or inflammation occuring in skin, organ, muscle or bone tissues.
- The pain can be a dull, constant ache with occassional sharp sesnations which is well localized (somatic) OR can resemble cramping which comes and goes and is poorly localized (visceral).

Introduction to Pain Management

- Neuropathic pain is caused by changes in the nervous system following disease or trauma where there is hightened response to stimuli and/or pain may be felt w/o stimuli.
- The pain usually presents as hot, burning, tingling sensations that sometimes radiate along nerve tracts.

Intro to Pain Management - Possible Barriers to Therapy

- Fear of addiction (psychological dependence)
- Fear of physical dependency & withdrawl
- Fear of developing tolerance
- Fear of taking too much medicine
- Fear of respiratory depression, constipation, and other side effects of medications
- Social and/or cultural factors

Introduction to Pain Management - Opioid Myths

- Opioids include drugs like morphine, oxycodone, codeine, hydrocodone, fentanyl, methadone, and demerol.
- These drugs DO NOT cause organ damage (caution combination products).
- These drugs do not have a “ceiling effect” or maximum dose (limited by side effects).
- Patients in pain rarely develop drug addictive behaviors when on opioids.

Introduction to Pain Management - Opioid Myths

- BE HONEST with yourself and provider concerning addiction issues.
- Physical dependence will develop over time and withdrawl symptoms can be avoided if the medication is weaned slowly.
- Tolerance IS NOT addiction and WILL develop with long-term use of opioids (except to the side effect of constipation).

Intro to Pain Management - Goals of Therapy

- The goals of pain management include reconditioning the nervous system, reducing pain, and improving function, sleep, and mood.
- General health management such as weight, sleep disturbances, cardiopulmonary risk reduction, and avoidance of harmful habits such as nicotine, alcohol, and illegal drugs are very important to successful therapy.

Non-Pharmaceutical Treatments for Chronic Pain

- Acupuncture
- Massage/vibration
- Hypnosis
- Meditation
- Relaxation/distraction techniques
- Music
- Ice/Heat
- TENS/PENS
- Physical Therapy
- Surgery
- Support Groups
- Prayer
- Deep Breathing
- Exercise
- Motivation

Drug Therapies & Concerns: Categories of Medications

- Centrally and peripherally acting non-opioids (tylenol, NSAIDs, tramadol)
- Centrally acting Opioids (short & long acting)
- Adjunct analgesics (antidepressants, anticonvulsants, and antiarrhythmics)
- Miscellaneous medication

Drug Therapies & Concerns: WHO Ladder

- The World Health Organization developed a three step hierarchy for analgesic pain management.
- Step 1: Non-opioid meds +/- adjunctive agents
- Step 2: Low potency opioids +/- non-opioids +/- adjunctive agents
- Step 3: High potency opioids +/- non-opioids +/- adjunctive agents

Drug Therapies & Concerns: Treatment Strategies

- Nociceptive pain (somatic and visceral types) responds very well to NSAIDs and opioids.
- Neuropathic pain usually does not respond to NSAIDs and modestly responds to opioids. Drugs of choice are antidepressants, anticonvulsants, and antiarrhythmics.

Drug Therapies & Concerns: Tylenol

- Centrally acting analgesic useful for mild to moderate pain.
- With chronic high-dose ingestion, can lead to liver and kidney dysfunction.
- Alcohol should be avoided or limited.
- Often found in combination with opioids (tylenol w/codeine, percocet, lorcet, vicodin)

Drug Therapies & Concerns: NSAIDs

- Aspirin, Motrin, Naprosyn, Indocin, Feldene, Lodine, Celebrex, Vioxx, others.
- There are several different chemical classes of NSAIDs, if one class fails, another class should be tried.
- Best results with high dosing. Watch for stomach bleeds or ulcerations (less with Celebrex & Vioxx) and liver/kidney failure.

Drug Therapies & Concerns: NSAIDs (con't)

- NSAIDs affect clotting (aspirin > others > Celebrex/Vioxx) and can interact with anticoagulants like Coumadin.
- NSAIDs can reduce the effectiveness of some antihypertensive meds (beta-blockers, ACE inhibitors, diuretics) and increase the effect of sulfonylureas (glyburide, glipizide) used in diabetes.

Drug Therapies & Concerns: NSAIDs (con't)

- NSAIDs should be taken with food to minimize stomach irritation.
- Alcohol should be avoided or limited.
- Often found in combination with opioids (aspirin w/codeine, Percodan, Alor 5/500)

Drug Therapies & Concerns: Ultram (Tramadol)

- Centrally-acting, opioid-like medication that alters the perception/response to pain stimuli.
- Most common side effects include dizziness, GI effects, and restlessness. Respiratory depression is possible.
- Drug interactions: TCA's, MAOI's, Tagamet, and Tegretol. Caution alcohol.
- Thought to be as effective as codeine.

Drug Therapies & Concerns: Opioids

- Low-potency opioids include codeine, hydrocodone, and propoxyphene.
- High-potency opioids include morphine, oxycodone, fentanyl, methadone, demerol.
- Short-acting opioids and long-acting (sustained release) opioids are available.
- All long-acting opioids are taken at set times, short-acting opioids are usually as needed.
- Available dosage forms: tablets, patches, injections, suppositories, lollipops

Drug Therapies & Concerns: Opioids – Side Effects

- Constipation (laxatives, stool softeners, high-fiber diet, exercise, water)
- Nausea/vomiting (10-40% pts until tolerance develops, may need antiemetic/opioid rotation)
- Sedation/mental clouding (more common with short-acting opioids and elderly patients)
- Respiratory depression (opioid naive, need for titration, rare in opioid-tolerant patients)
- Others: hypotension, itching, dry mouth, sleep disturbances, urinary retention and restlessness.

Drug Therapies & Concerns: Opioids

- Drug interactions primarily involve additive sedation, drowsiness, or dizziness with other medications or alcohol.
- Alcohol should be limited or avoided.
- Impaired judgement and coordination can occur, especially during titration.
- Do not crush or chew sustained release products

Drug Therapies & Concerns:

Adjunctive Agents – Antidepressants

- TCA's (amitriptyline, imipramine, nortriptyline and desipramine and SSRI's (Prozac, Zoloft, Paxil, and Effexor) are most common.
- TCA's are generally more effective than SSRI's
- They work for neuropathic pain by delaying or inhibiting pain transmission, decreasing burning sensations, improving sleep disturbances and elevating mood in often co-existing depressive states.
- Common side effects include sedation, urinary retention, dry mouth, drowsiness, dizziness, constipation, weight gain, sexual dysfunction.

Drug Therapies & Concerns:

Adjunctive Agents: Anticonvulsants

- Often referred to as antiepileptics; these drugs include Tegretol, Dilantin, and Neurontin.
- These drugs act to stabilize nerve membranes which decreases the rate and speed of pain transmissions
- Side effects include drowsiness, fatigue, dizziness, and double vision which necessitates slow titration. These drugs must be slowly weaned.
- Many drug interactions and careful blood monitoring required. Make sure your physician and pharmacist have complete med list.

Drug Therapies & Concerns:

Adjunctive Agents: Antidysrhythmics

- Not as commonly used as other adjunctive meds but includes Mexiletine and soon to be available in the U.S. transdermal lidocaine.
- This category of medications decreases the rate at which nerves can fire impulses thereby decreasing pain transmission.
- Side effects include GI distress/nausea/vomiting (40%), dizziness, nervousness, incoordination, headache, and blurred vision. Slow titration.

Drug Therapies & Concerns: Miscellaneous Medications

- Antianxiety agents (Benzodiazepines, BuSpar)
- Non-benzodiazepine hypnotics (Ambien, Sonata)
- Corticosteroids (Prednisone)
- Skeletal muscle relaxants (Flexeril, Robaxin)
- Capsiacin Cream (Zostrix cream)
- NMDA receptor antagonists (Dextromethorphan)
- Glucosamine/Chondroitin (Cosamin DS)
- Herbal Review (refer to handout)
- Web Site Handout

Closing Remarks on Chronic Pain Management

- Pain is becoming the fifth vital sign.
- The goals of pain management include reconditioning the nervous system, reducing pain, and improving function, sleep, and mood. “comfort level vs. pain level”
- Patients and physicians work together to overcome barriers to therapy.
- Medication is only a part of the overall treatment plan.

Q&A - Completion

- Questions?
- Completion of Program